This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A system for transmitting a bitstream, the system comprising:

a first communication interface configured to receive the bitstream, the bitstream including a timing relationship for data in a portion of the bitstream;

a processing apparatus configured to a) process the data in the bitstream portion in a manner that ~~changes the timing relationship of the data in the bitstream portion~~ introduces jitter in the data and b) create a timestamp including timing information that describes the timing relationship of the data as the data was received; and

a second communication interface configured to transmit an output bitstream onto a channel, the output bitstream including the ~~timing relationship for data in the portion of the bitstream as received by the first communication interface~~ timestamp and the data including jitter introduced by the processing apparatus.

2. (Currently Amended) The system of claim 1 wherein the processing apparatus is ~~further~~ configured to ~~create a timestamp including timing information, the timing information describing the timing relationship of data in the portion of the bitstream~~ multiplex, re-multiplex, de-multiplex, encode, transcode, scramble, and de-scramble the data.

3. (Currently Amended) The system of claim ~~2~~ 1 further including a synchronization source configured to provide a reference time to the processing apparatus that is used in generating the timestamp.

4. (Currently Amended) The system of claim ~~2~~ 1 wherein the processing apparatus ~~is configured to create the timestamp using timing information that describes the timing relationship of data in a portion of the bitstream as received by the first communication interface~~ includes a set of processing modules that may each create the timestamp.

5. (Currently Amended) The system of claim ~~2~~ 1 wherein the processing apparatus is configured to add the timestamp to at least one packet in a set of packets included in the first bitstream.

6. (Original) The system of claim 5 wherein the bitstream is an MPEG-2 compressed bitstream and the processing apparatus is configured to add the timestamp to a transport packet in the MPEG-2 bitstream.

7. (Original) The system of claim 6 wherein the processing apparatus is configured to replace a synchronization byte in the bitstream with a new synchronization byte, the new synchronization byte signalling the beginning of payload data for a payload portion of the bitstream.

8. (Original) The system of claim 6 wherein the second communication interface is configured to transmit the output bitstream according to a DVB/ASI protocol.

9. (Currently Amended) A method for transmitting a bitstream, the method comprising:

receiving the bitstream;

~~providing~~ creating a timestamp that includes timing information that describes a timing relationship of data in a portion of the bitstream as the data was received;

processing the data in the bitstream portion in a manner that ~~changes the timing relationship of the data~~ introduces jitter into the data; and

transmitting an output bitstream onto a first channel, the output bitstream including the ~~timing relationship for data in the bitstream~~ timestamp and the data including jitter introduced by the processing.

10. (Currently Amended) The method of claim 9 further including adding a synchronization byte that signals the beginning of payload data for a packet included in the bitstream. ~~creating a timestamp including the timing information.~~

11. (Original) The method of claim 10 wherein the bitstream includes a set of packets and the method further includes adding the timestamp to at least one packet in the bitstream.

12. (Original) The method of claim 9 further including receiving the bitstream from a second channel.

13. (Currently Amended) The method of claim 12 further including restoring the timing relationship of the data in the portion of the bitstream after processing has occurred using the timing information included in the timestamp.

14. (Original) The method of claim 9 wherein the bitstream is an MPEG-2 compressed stream.

15. (Original) The method of claim 14 wherein transmitting uses a DVB/ASI protocol.

16. (Original) The method of claim 15 wherein the transmitting utilizes an 8B/10B encoding scheme.

17. (Currently Amended) The method of claim 14 further including adding ~~one of~~ a stream identifier ~~and a new synchronization byte~~ to the bitstream.

18. (Original) The method of claim 9 wherein processing comprises one of multiplexing, re-multiplexing, de-multiplexing, encoding, transcoding, scrambling, and de-scrambling.

19. (Original) The method of claim 9 wherein the processing is performed in real-time.

20. (Currently Amended) A system for providing a bitstream, the system comprising:

means for receiving the bitstream;

means for creating a timestamp that includes ~~identifying~~ timing information ~~in the bitstream~~, the timing information describing a timing relationship of data in a portion of the bitstream as the data was received;

means for processing the data in the bitstream portion in a manner that ~~changes the timing relationship of~~ introduces jitter in the data; and

means for transmitting an output bitstream onto a first channel, the output bitstream including the ~~timing relationship for data in the bitstream~~ timestamp and the data including jitter introduced by the processing.

21. (Currently Amended) The system of claim 20 wherein the means for transmitting comprises a means for transmitting using a DVB/ASI protocol. ~~further including means for receiving the first bitstream, the means for receiving the first bitstream coupled to the means for processing the data.~~

22. (New) A system for transmitting a bitstream, the system comprising:

a first communication interface configured to receive the bitstream, the bitstream including a timing relationship for video data in a portion of the bitstream;

a processing apparatus configured to a) process the video data in the bitstream portion in a manner that introduces jitter in the video data and b) create a timestamp including timing information, the timing information describing the timing relationship of the video data in the portion of the bitstream as the video data was received; and

a second communication interface configured to transmit an output bitstream onto a channel, the output bitstream including the timestamp and the video data including jitter introduced by the processing apparatus.

23. (New) The system of claim 22 wherein the processing apparatus is configured to multiplex, re-multiplex, de-multiplex, encode, transcode, scramble, and de-scramble the data.